

Volume 16 No. 12

December, 1965

1966 REGISTRATION IS DUE!

Pilot registration for 1966 will commence on January 1st. All pilots residing in the State of Montana must hold a current registration with the Montana Aeronautics Commission.

State registration is mandatory in Montana. All funds derived from registration provide the vital funds needed for Search and Rescue Operations in our state. New registration forms are being enclosed in this issue of Montana and the Sky newsletter and they will be available from the Montana Aeronautics Commission and the General Aviation Operators.

Please carefully complete the form and return with your \$1.00 registration fee, to the Commission—P. O. Box 1698—Helena, Montana. (Please send only the \$1.00 registration fee for the current year.)

Revisions to the Airport Directory will be sent to all 1966 registered

pilots shortly after the first of the year. (Please remove the pages in your present Directory cover and insert the new revisions when you receive them.)

> FLY LEGAL— REGISTER IN JANUARY!

WILEY'S "MONTANA AND THE SKY" GOES TO PRESS

The book entitled "Montana and the Sky," visual climax of the Aviation History Project accomplished by Frank W. Wiley, under the auspices of the Montana Aeronautics Commission and the Montana Historical Society, has gone to press!!

The book which is the accumulation of extensive research and labor during the past four years, contains more than 200 rare aviation photographs (chosen from a collection of thousands) and relates the activities of some 100 pioneer pilots.

Montana and the Sky can best be described by the following endorse-

ments based on preview readings of Frank's manuscript.

Walter Hope, Chairman of the Montana Aeronautics Commission—
"The Montana Aeronautics Commission, through its long association with Frank Wiley feels that his book "Montana and the Sky" will meet with high public acceptance. Frank's knowledge of aviation and his wide personal acquaintance with early day fliers, coupled with his ability as an author, makes this book an outstanding production."

Michael Kennedy, Director of the Montana Historical Society—"The Montana Historical Society is extremely pleased with the end result of this long, intensive research. "Montana and the Sky" will be a real contribution to our State—to Aviation and to the West. Having read the manuscript, I can recommend this book without reservation."

John Hutchins of the Book of the Month Club and former book review

(Continued on Page 3)

Official Monthly Publication of the

MONTANA AERONAUTICS COMMISSION

> Box 1698 Helena, Montana

Tim Babcock, Governor

Charles A. Lynch, Director

Walter Hope, Chairman Carl W. (Bill) Bell, Vice Chairman Jack R. Hughes Secretary Herb Jungemann, Member E. B. Cogswell, Member Clarence Anthony, Member Gordon Hickman, Member





September, 1965

	Total Operations	Instrument Operations
Billings	10,024	730
Great Falls	10,020	900
Missoula	7,041	308
Helena	3,905	73

FOR SALE: 1955 PA 22—150 Super Custom—
Full panel—VHF, LF—Rotating beacon—Elec.
compass—Wheel pants. Excellent condition with
all AD's on A/C and engine. Price: \$4,200. Contact: Morrison Flying Service, Helena. Phone:
442-2190.
FOR SALE: PA-12-115 Lycoming VHF, Licensed to March, 1966. Contact: Merritt Smith,
White Sulphur Springs.
FOR SALE: Aeronca—7 AC—New Engine—
Real clean. Contact: Evald Larsen. Phone: 7651130, Plentywood. Mont.
FOR SALE: 1948 Stinson 108/3 Station Wagon
—165 h.p.—250 SMOH—Full panel—New Rubber—VHT/3. Write: G. E. Strong, P. O. Box
2602. Great Falls. Phone: 454-1057 or 453-2519.
FOR SALE: Four Piper PA-18 airplanes. 150
h.p. engines, total time between 150 and 1500
hrs. Priced for immediate sale. Will take trades.
Contact Walter Huffman, Big Timber.
FOR SALE: One 1959 Cessna Sky Lane—A
beauty—Priced at only \$11.500—Will take trades.
Contact: Walt Huffman, Big Timber.
WANTED: Cessna 140—Fabric or metal wing.
Low Time—90 h.p.—VHF—Fresh license—Delivered. Royal Turley, Three Forks, Mont. Phone:
285-3510.
FOR SALE: 1946 Cessna 120—All electric—
Nav. and Landing light—VHT/3 radio—Full
panel—570 hrs. SMOH on Chrome eng.—2264
hrs. TT on A&E—Fabric good—Li-ensed to Nov.
1966—Price: \$2400. Contact: Warren Thacker,
744 Terry Ave., Billings, Mont. 59102. Phone
25-4215 after 5.00 p.m.
FOR SALE: 1946 Luscombe 8A—TT on A&E
921 hrs.—Fresh license 11/1/65—Wings recovered
3 yrs.—New windshield and tires—Wired for
lights—Turn & bank—24-hr. clock—Highly polished aluminum, red trim—Metal prop—345 hrs.
on engine S.T.O.H. with heavy pistons—Uses no
oil and one of the cleanest Luscombes in the
state for \$1,350. Contact: Paul D. Marvel, Rexford. Mont. Phone 386-8223.
FOR SALE: Stinson Voyager 150—Radio
equipped — Top condition — \$950 down, \$95.45
monthly—Will trade for Piper PA-18/PA-12, or
PA 16. Contact: Ernest Tooke, Ekalaka, Mont.



SPECIAL FILM NOTICE

National Aeronautics Administration films have Space been made available to the Montana Aeronautics Commission for distribution within Montana.

AVAILABLE IMMEDIATELY AMERICA IN SPACE—14 Minutes, color.

Brief overview of NASA's First Five Years, showing growth of space efforts from its beginning, through to the early phases to land an American on the moon.

CELESTIAL MECHANICS AND THE LUNAR PROBE-91/2 minutes, color.

Describes mechanics of guiding lunar probes.

THE CLOUDS OF VENUS-30 minutes, color.

This film documents the planning, launching and results to date from the space probe Mariner II. Information relayed by Mariner II during its passage by the planet Venus on December, 1963 is included.

LUNAR BRIDGEHEAD-281/2 minutes, B & W.

The film presents on-the-spot coverage of the events surrounding the launch and successful flight of the Ranger VII spacecraft which transmitted, to earth, over 4,000 photographs as it approached the lunar surface, some of these pictures are included.

THE MASTERY OF SPACE—58 Minutes, color.

Traces the development of Project Mercury, U. S. man-in-space program and documents the flight of Freedom 7 as well as the earth orbital flight of Friendsihp 7 on February 20, 1962. Project Gemini, Apollo and Saturn booster are also briefly dis-

PROJECT APOLLO-MANNED FLIGHT TO THE MOON-13 minutes,

This film shows the principle steps that will be taken by NASA to place men on the moon and get them back safely. It shows the principle features of the Gemini spacecraft, the modified Titan booster and it shows the complete sequences of events for the manned lunar landing from earth launch to return.

THE FOLLOWING TWO NEW FILMS WILL BE AVAILABLE WITHIN A FEW WEEKS.

THE FOUR DAYS OF GEMINI 4-1965-28 minutes, color.

A documentary film covering the spectacular Gemini-Titan 4 mission of Astronauts McDivitt and White. Includes beautiful color sequences of pre-launch and launch activities, Astronaut White's spectacular "spacewalk," and many other experiments conducted on the four day mission. The film also depicts pre-flight training and a look at White's EVA suit and "space-gun."

COME FLY WITH ME, DARLENE-1965-131/2 minutes, color.

This film tells the story of how a wife overcame her fear of flyinglearned to enjoy plane trips with her pilot husband and family-and became an ardent supporter of aviation. The photography is excellent, and clearly and colorfully illustrates the utility of the airplane and the fun of flying.

MISCELLANEOUS MAC FILMS PRE-SENTLY AVAILABLE:

Agricultural Aviation, 14 Minutes, Color.

Airport America, 14 Minutes, Color.

Air Taxi, USA, 15 Minutes, Color. Aviation and the States, 21 Minutes, Color.

Flight Decision, 14 Minutes, Color. Flying Businessman, 14 Minutes, Color.

Montana and the Sky, 17 Minutes, Color.

Roads in the Sky, 15 Minutes,

Approach to Land, GCA, 24 Minutes, B & W.

Approach to Land, ILS, 24 Minutes, B & W.

The Best Investment We Ever Made, 20 Minutes, Color.

A Brochure giving full film descriptions is available upon request.

NOTE: In ordering, please include: Complete mailing address for films, viewing dates and alternates, film titles and alternates, also indicate if we may interchange titles and dates, substitute comparable titles and schedule for first open date.

(Continued-(Wiley's Book)-from page 1)

editor for the New York Herald-Tribune—After reading the manuscript John Hutchins warmly applauded the book, "Montana and the Sky."

Associate Justice, Stanley M.
"Larry" Doyle—Judge Doyle, I on g
time friend and acquaintance of
Frank Wiley ably capsules "Montana
and the Sky" in his introduction to
the book. The following is an excerpt from that introduction:

.... "Many histories of aviationprivate, commercial and air mail have been written, but this is the first and only volume on these subjects relating to Montana, the Treasure State, and this book is a treasure of aviation facts over a period from 1865 to 1930. This, then, is the story from the author's own knowledge and from facts he has documented from 1919 to 1965. It encompasses the pilots he knew, the planes and equipment and the men whose faith in the future of the airplane helped make the industry what it is today"



Air Cadet Stanley M. "Larry" Doyle 1917

ORDERS ARE BEING TAKEN

Special Collectors edition may be ordered until December 25th for \$35.00—the price for this limited edition (250 copies only) will be available for \$50.00 after Dec. 25.

Standard Edition price is \$10.00.
Orders taken before the book is available will be acknowledged by a special card which will be sent upon receipt of the order.

ORDER FROM: The Montana Historical Society—Sixth and Roberts—Helena, Montana 59601.

The photographs shown in this



Barnstorming pilots—1925 beside a Standard J1 (lt. to rt.) Frank Wiley, Dean Turner, Cecil Shupe and Earl Vance.

issue through the courtesy of the Historical Society are examples of the aviation collection compiled by Frank Wiley.

NOTE: An order blank has been printed on the last page of your December newsletter for your convenience.

HAVE YOU READ-

The cover feature in the November issue of Air Transport World? An article entitled "Frontier's Dymond Pioneers for Locals," by Joseph S. Murphy, is an interesting story of Lewis W. Dymond, board chairman and president of Frontier Airlines.

The article tells of the almost immediate turnabout of Frontier when Dymond became president in 1962 and the companies miraculous expansion since that time. Mr. Murphy also describes Dymond's own personal career advancements as a standout example of the self made airline executive, from apprentice mechanic to his present position. During the years Dymond was advancing "up-the-ladder" he was able to obtain his law degree and pilots ATR

This article is good reading of an outstanding success story of man and company and will be of particular interest to those in the state who had the opportunity to meet Mr. Dymond on his tour of nine Montana cities in 1962—a few months after he became Frontier's president.

FOR SALE: 1959 Cessna 172—1700 hrs. TT—500 hrs. SMOH. Annual due Oct. '66—Full panel—VHT/3 Superhomer—Speed Fairings—Clean airplane—Price \$6500. Contact: Mountain Flyers Inc., 1605 Middlesex, Missoula. Phone: 549-9624.

FOR SALE: Stinson 108/3 Station Wagon—
12 Channel VHT/3—Beautiful white and green acrylic paint—Loaded—This airplane has everything—A very clean well equipped Stinson in perfect condition. Contact: J. V. Pauley, Miles City. Phone 232-2022.



December 6—Helena, Aviation Mechanics Refresher Seminar, Awards Banquet.

December 7—Helena, Montana Aeronautics Commission Monthly Meeting.

December 7-10—Atlanta, Georgia
—National Aviation Trades Association annual convention.

December 11—Great Falls—Meeting of the Ladies 99's.

December 31—Closing date for the Annual FAA Mechanics Safety Award Program for 1965.

January 10, 11, 12—Ohio State University, Columbus, Ohio—The National Aviation Trades Association, the AOPA Foundation, Inc., and Link Foundation in cooperation with the Federal Aviation Agency are sponsoring a special flight instructor refresher course.

January 14-15—Denver, Colorado
—Flying Farmer Days—Stock Show
and Banquet Fly-In Columbine Airport. Transportation to Motel Essex
House. For Reservations Write:
Grace Longbrook. 160 S. Holland,
Lakewood, Colorado.

April 29, 30, May 1—Livingston— MPA Annual Convention.

JOHN PULASKY AND DOUGLAS SMITH FLIGHT SEMINAR WINNERS

John Clark Pulasky, Billings and Douglas Smith, Kalispell, were named 1965 Montana winners of the Flight Seminar For Youth Program at a banquet held in Helena on October 30. Glen Larum of Charlo and Dan Himelspach of Broadus were named alternates.

The remaining four semifinalists were: James Jay Billmayer of Hogeland; Gary Pickens of Florence; William F. Schaffer of Deer Lodge and Sharon K. Schott of Sand Coulee.

The delegates were selected by competitive examination and personal interviews and the two winners received an all expense paid trip to the Seminar. The Seminar held in Oklahoma City, Oklahoma on No-vember 14-17th, sponsored and conducted by the National Association of State Aviation Officials, the Federal Aviation Agency and the various State Aeronautics Commissions, was planned and coordinated by Mr. A. B. McMullen, Executive Vice President, NASAO, Washington D.C.

Montana's participation, sponsored by the Montana Aeronautics Commission, was coordinated through Director Lynch, Mary Jo Janey, Aviation Education Supervisor and Jack Wilson, Safety and Education Officer. Delegates were present from all sections of the United States extending as far as Maine to the Northeast, Oregon to the West-Wisconsin to the North and Texas to the South.

The Schedule of Events during the three day Seminar:

Sunday, November 14: Meeting in the Civic Room of the Sheraton Hotel. Introductions, briefing and group discussion.

Monday, November 15: FAA Aeronautical Center. The delegates were shown through the Academy and the Aero Medical Center.

Evening meeting: Group discussion and Education Movies pertaining to General Aviation and Aviation opportunities for youth.

Tuesday, November 16: Oklahoma City Air Material Area and tour of the facilities at Tinker Air Force Base.

Evening: Chuck wagon dinner, furnished by the Oklahoma City Chamber of Commerce and a guided tour of the Cowboy Hall of Fame.

Wednesday, November 17: Meeting and press conference with Governor Bellmon at the State Capitol and Guided Tour of the Aero Commander Aircraft Factory at Wiley Post Airport.

The Flight Seminar for Youth Program at both the state and national level is conducted to give the youth of the United States a better insight into the opportunities available in aviation and the various problems which confront the aviation and aerospace industries. It is hoped that the Seminar can be continued on a yearly basis and that there will be a continued increase in the participation by Montana high school students.

The following letters of appreciation were received by Mr. Wilson, who accompanied the two winners to Oklahoma City:

Dear Mr. Wilson:

I'd like to take this opportunity to thank the Montana Aeronautics Commission for sponsoring my trip to the National Flight Seminar in Oklahoma City last week. It was an experience I'm sure I'll never forget, and I certainly intend on trying to get kids from Kalispell more interested next year.

I'd especially like to thank you, Mr. Wilson, for putting up with John and me for those six days. I'd probably still be at the Great Falls airport wondering what to do with my ticket if you hadn't been there.

Anyway, I had a wonderful time meeting kids from all over the States, touring the FAA Academy, the Aero Commander Factory, and Tinker A.F. Base, and only wish that more Montana kids could have went with us.

> Yours sincerely, Doug Smith Route 4, Kalispell.

Dear Mr. Wilson:

First of all I want to apologize for not writing sooner, when I got home the homework was awful deep so I haven't had much time for anything else. May I express my sincere thanks for the wonderful trip and opportunity, you, Miss Janey, and the rest of the Commission gave me. By that I mean the trip to Helena and the lovely banquet as well as an opportunity to meet more young people interested in aviation. Most important and best of all was the trip to Oklahoma City. It was a trip I shall never forget. I just wish more young people could have the opportunity to participate in the program, and I want to thank you for putting your confidence in me to represent the State of Montana at the National Flight Seminar.

I really enjoyed your company on the trip there and back, you were really great! I am sure Doug feels the same way. Anytime you are in Billings please give us a call, we're at your service. Thanks again.

If I may impose upon you and if you have the time I would appreciate any information you could give me concerning a commercial pilotage for the airlines service in our state. Also, I forgot to pick up the aeronautical map you had for me so if you will send it I shall be happy to pay the postage.

Please give a thanks for my Dad and myself to Mr. Rauscher for flying us to and from Helena.

Once again thank you, I shall never forget our trip.

> Very respectfully yours, John Pulasky Route No. 3, Billings.

NOTES ON MONTANA WINTER WEATHER FLYING

R. A. Dightman Meteorologist in Charge WBAS, Helena, Montana

Much has been written and said over the years on winter flying weather problems as they affect general aviation, so in a sense this is an attempt at a brief summary of some types of weather which have been particularly troublesome.

1. MECHANICAL TURBU-LENCE over mountain ridges may be expected at least to some degree whenever winds of any strength are blowing. The most common situation under which turbulence of this kind may occur is that of "Chinook" winds-which may blow along eastern slopes almost anywhere in Montana several times each winter. This kind of turbulence is usually strongest near the elevations of the peaks and/or ridges over which the wind is blowing and is always worse downwind from the ridges. In general, too, the stronger the wind the rougher the air. The presence of "lenticular" clouds near mountains is a good indicator that such turbulence exists, and whenever aviation weather stations such as Cut Bank, Great Falls, Livingston, etc., report strong westerly winds, some "roughness" of the air is almost guaranteed. There are two ways to lessen the roughness of a flight under these conditions (besides staying home or reducing airspeed); (1.) fly higher (2,000 or 3,000 ft.) than the ridges, and (2.) detour the rougher areas (maybe both!).

2. SNOW COVER. It is the nature of the cold season in Montana that most precipitation will fall as snow, and a few storms each winter will leave the ground snow-covered over large areas. As all experienced pilots know, snow cover that is fairly uniform over an area will effectively mask the usual contrasts, and if deep enough, in cold weather will cover roads, rivers, railroads, etc, so that these landmarks are difficult to recognize—if they can be seen at all. Flying VFR above general snow cover presents the problem that all of the usual landmarks are less easily identified; therefore VFR under such conditions is less simple than when landmarks are more readily recognized. Carrying this analysis a step farther, snow showers over snow cover (even with visibilities above 3 miles) often complicate the picture further because the snow cover already has made reference points more difficult to recognize. The suggestion is that VFR in snow conditions is often much more of a task than under rain, given the same reportable visibility under both. In planning VFR over snow cover, it is well to bear in mind the possible disorienting effects of snow showers—even if only light and lasting only a few minutes.

Other cold season flying weather problems (fog, stratus, clouds on ridges, etc.) are still with us, too, but they have been discussed in Montana and the Sky within the last couple of years. Winter flying weather is about as different as it can be from summer conditions, and seldom lacks variety. Watch for snow squalls, and—Pleasant Flying this Winter!

STATISTICS

61/37 60/27 61/22

| Accidents | Total | Fatalities | 1964 Total | 61 | 37 | 64 | as of this date | 60 | 27 | (65 | as of this date | 61 | 22 |

TWENTY-THREE ATTENDING THIRD AVIATION MECHANICS SEMINAR

The Third Montana Aviation Mechanics Refresher Seminar began classroom sessions on November 29 in the Department of Aeronautics and Related Trades of the Helena Senior High School's facilities on the Helena Airport.

Twenty three qualified Montana A/E Aviation Mechanics from 16 Montana cities are enrolled in the Seminar which is sponsored by the Montana Aeronautics Commission. Instruction is presented by represen-

tatives of leading aircrast manufacturers; component manufacturers, the FAA and electronic services.

The first AMRS held in 1963 was the first of its size and scope to be staged in the United States. With the very favorable reaction to the two previous seminars by the trainees and the participating companies, MAC has again sponsored the course this year in order to give a greater number of mechanics an opportunity to attend.

CLASS SCHEDULE

TIME NOVEMBER	COMPANY/AGENCY 29	REPRESENTATIVE
8:00 A.M.	Montana Aeronautics Commission	Jack Wilson, Course Manager
8:30 A.M. 12:45 P.M.		Al Eurich
7:00 P.M.	Pacific Airmotive Corp Hoffman Taff, Inc	Paul T. Jenkins
NOVEMBER		
8:00 A.M.	Mooney Aircraft Inc	Tom Vaught
10:00 P.M.	Lycoming Div. Avco. Corp Brittain Industries, Inc.	
DECEMBER	1	
8:00 A.M.		
till 10:00 P.M.	Piper Aircraft Corp	Jesse Krall
		William Leuthold, Jr.
DECEMBER 2		
		William Leuthold, Jr.
1:45 P.M.	Bendix Corp	
7:00 P.M.	Champion Spark Plug Co	Anthony "Tony" Orgain
8:00 A.M.		
till 5:00 P.M.	Cessna Aircraft	Ken E. Gardner
DECEMBER 4	1	
8:00 A.M. till 5:00 P.M.	Beech Aircraft Corp	.R. T. Nielson
DECEMBER 5		
1:00 P.M.	Beech Aircraft Corp	R T Nielson
5:00 P.M.		.K. T. TVCISON
DECEMBER 6		
	Beech Aircraft Corp	
12:45 P.M.	FAA Review & MAC Summary	Mills & Wilson

AIRPORT NOTES



By James H. Monger, Assistant Director, Airports.

GLENDIVE. The Montana Aeronautics Commission granted the City of Glendive \$1,000.00 in the form of a preliminary engineering grant to aid them in a study for a new air carrier airport at Glendive. This study will incorporate the cost estimate for a new airport along with layout plans and field surveys. Wenzel and Company, Engineers of Great Falls, are conducting this survey and it is expected to be completed January 1, 1966. The information derived from this survey will then be presented to the taxpayers within the City of Glendive and Dawson County in the event that the total cost projection for the new airport is of questionable amount. If the City and County electors vote on this proposal and accept it, it will mean that Glendive will be building a new airport approximately six (6) miles northwest of town. The new airport will be so designed to accommodate the Convair 580. (The existing airport near town is not adequate to handle the Convair 580 that will be flown by Frontier Airlines on that route early in 1967.)

HAVRE. Morrison-Maierle, Inc., Consulting Engineers of Helena, have been retained by the Havre City-County Airport Board to conduct a study for runway extension on the Havre Airport. The Montana Aeronautics Commission has granted the City-County Airport Board at Havre, \$1,000 to aid in the financing of this study. The runway will be extended approximately 600 feet in order to accommodate the Frontier Airlines Convair 580 type aircraft.

Convair 580 type aircraft.

SCHAFER. The pilot campground has now been completed by the United States Forest Service at the airstrip at Schafer Meadows. The total cost of this campground facility was \$3,000 and 50% was paid by the Aeronautics Commission at the



Schafer Meadows airstrip's new pilots' campground.

request of the Montana Pilot's Association. The Forest Service work crews did an excellent job on the construction of this unit and the facility is already getting a great deal of use from hunters flying into the area. The campground consists of six large picnic tables, three are permanent and three are moveable, several fireplaces, garbage cans, and a wood supply is furnished by the Forest Service, two comfort stations and a large fire circle for evening meetings. All Montana Pilots are urged to use this facility and enjoy it and they are reminded to keep the campground in its present clean and orderly condition. Permanent tie-downs for ten aircraft were also constructed as part of this project.

1966 AIRPORT DIRECTORY. The Airport Engineers have now finished the necessary revisions for airports that are included in the Airport Directory. We anticipate being able to mail the revision packets to be inserted into your last year's cover early in 1966. If you know of any airports that have changed from the way they are shown on the 1965 Directory, please inform this office immediately so that the proper notation can be made for next year.

MONTANA AIRPORT SURVEY. The financial survey of all Montana airports has now been comoleted. This survey will become a part of the National Survey. Airport Boards have returned information that indicates for the next four years there will be airport improvement projects costing \$10,974,302.72. Of this

amount it is estimated that local funds for this work will be available only in the amount of \$3,743,173.72. All airport work consists of new construction or building projects in addition to daily and yearly maintenance. This information will be used by Congress to determine the extent of the Federal Aviation Agency grant money that would be desirable for this period of time. The Montana Aeronautics Commission is estimating that they will have approximately 2.2 million dollars available for state loans up to and including 1969. To-date the Montana Aeronautics Commission has been directly involved in 135 separate airport improvement projects. We wish to thank all Airport Managers and Airport Boards for the help that they rendered in accomplishing this 4 year financial survey.

Airport projects now under construction at the end of 1965 are as follows:

Great Falls International—Runway & Taxiway Reconstruction.

Billings—Runway Extension.

Missoula—Runway & Taxiway Reconstruction.

Benchmark—New Airport.

Great Falls International—Control Tower.

Recent allocations made by the FAA for 1966 projects:

Bozeman—Taxiway.
Polson—Extension and Pavement.
Plentywood—Seal Coat.
Laurel—New Runway.
Anaconda—Pavement.
Dillon—Pavement.

Choteau—Extension and Pavement.

Miles City—Taxiway.

Great Falls International-Electrical Duct and Water Systems.

Billings—New Taxiway & Runway Lights.

The FAA will continue to receive requests for aid and review the requests and make allocations yet this year or early next spring for jobs that could possibly be constructed under the Federal Aid Program in 1966. We are anticipating from the Montana Aeronautics Commission that the additional 1966 projects could be:

Scobey—Seal Coat. Sidney—Runway Extension

Glendive—Airport Redevelopment.

Libby—New Airport.

Butte-Overlay.

Billings—Taxiway. Fairfield—Pavement.

Forsyth—Seal Coat.

Kalispell—Runway Extension.

Baker-Pavement.

Big Timber—Pavement.

Circle—Pavement.

East Glacier—New Airport.

Gardiner—Rebuild Airport. Missoula—General Aviation Area.

Conrad-Seal Coat.

Deer Lodge-Airport Fence.

Great Falls—General Aviation

Livingston-Runway Lights. Havre—Runway Extension.

Wolf Point—Runway Extension.

Shelby-Overlay.

Fort Benton-Seal Coat.

Cut Bank-Overlay.

Malta—Runway Extension.

Projects that are anticipated for 1966 by local and state government and Montana Aeronautics Commission only, with no FAA participation, are as follows:

General Aviation Utility Airports at: Broadus, Hysham, Rudyard, Hobson, Stanford, Winnett.

The Montana Aeronautics Commission will continue doing site investigation and preliminary engineering on proposed general aviation utility airports for airport improvements at: Rapelje, Wibaux, Sweetgrass, Saco Hot Springs, Roosville, Worden, Fairview.

The MAC Beacon Program for 1966 could possibly have the following locations ready to receive a relocated beacon: Anaconda, Polson, Chinook, Libby, Lincoln, Seeley Lake, Stanford, Jordan, White Sulphur Springs, Augusta, Ryegate, Kalispell (City Field).

There are many other non-federal aid projects that will be developed in Montana between the local airport board and the Montana Aeronautics Commission. We do not know all of these locations, however, the following are a few proposed projects:

Shelby—Hangar Construction.

Glasgow—Hangar/Shop Building. Malta-Hangar/Shop Building.

Kalispell (City Field)—Runway Extension.

Missoula-Maintenance Equipment.

Jordan—Runway Lights.

Culbertson—Runway Lights.

Poplar-Runway Lights.

Lewistown—T Hangars.

Great Falls-Water Pumping Sys-

Billings—T Hangars.

Seeley Lake—Hangar/Shop Build-

White Sulphur Springs-Fencing. Butte—Terminal Building Addi-

Roundup—Hangar Addition. Deer Lodge—Access Road. Valier—Runway Lights.

The research that is now in the process already indicates that the 1966 calendar year could be one of the biggest years for airport development the State of Montana has ever seen.



FEDERAL AVIATION AGENCY ITINERARY LISTING

Airport	Dec.	Jan.	Feb.	March
Bozeman (Gallatin Field	1) 16		17	
Culbertson	1		2	
Glasgow		19		16
Glendive	15		16	
Great Falls (Internat'l)	9	6	10	10
Lewistown	22		22	
Miles City (Municipal)		13		24
Missoula	22	20	24	24
Sidney		12		23

Note: Provisions have been made to give private pilot written examinations ON AN AP-POINTMENT BASIS ONLY at the following FAA Flight Service Stations:

Bozeman Butte Cut Bank Dillon

Lewistown Livingston Miles City Missoula

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE AND REPORTING POINTS

Extension and Redesignation of Federal Airways

(Airspace Docket No. 65-CE-105) On August 28, 1965, A Notice of Proposed Rule Making was published in the Federal Register (30F.R. 11147) stating that the Federal Aviation Agency is considering amendments to Part 71 of the Federal Aviation Regulations that would extend V-536 from Mullan Pass, Idaho, via the new Kalispell, Mont., VOR to Great Falls, Mont.; and that would redesignate V-231 from Missoula, Mont., via the intersection of Missoula 354° and Kalispell 180° radials; to Kalispell.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received

were favorable.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0001 EST, February 3, 1966, as hereinafter set forth.

In 71.123 (29 F.R. 17509):

1. V-231 is amended to read as follows.

V-231 From Missoula, Mont., via INT Missoula 354° Kalispell, Mont., 180° radials; to Kalispell.

2. V-536 is amended to read as follows:

V-536 From Walla Walla, Wash., via Mullan Pass, Idaho; Kalispell, Mont.; to Great Falls, Mont.

(These amendments are made under the authority of Sec. 307 a(a) of the Federal Aviation Act of 1958 (49U.S.C. 1348).

Designation of Control Zone and Transition Area (Airspace Docket No. 65-CE-113)

On September 10, 1965, a Notice of Proposed Rule Making was published in the FEDERAL REGISTER (30 F.R. 11644) stating that the Federal Aviation Agency proposed to designate controlled airspace in the vicinity of Kalispell, Montana.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. The one comment received was favorable.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0001 EST, February 3, 1966, as hereinafter set forth.

1. In Section 71.171 (29 F.R. 17581) the following control zone is added:

Kalispell, Montana

Within a 5-mile radius of Flathead County Airport, Kalispell, Montana (Lat. 48°18'49" N., Long. 114°15'16" W.)

2. In Section 71.181 (29 F.R. 17643) the following transition area is added:

Kalispell, Montana.

That airspace extending upward from 700 feet above the surface within 2 miles each side of the Kalispell VOR 332° radial, extending from the arc of a 5-miles radius circle centered on Flathead County Airport (Lat. 48°18'49" N.; Long. 114°15'16" W.) to the VOR; and that airspace extending upward from 1200 feet above the surface within 5 miles E and 8 miles W of the Kalispell VOR 166° and 346° radials extending from 14 miles S to 7 miles N of the VOR.

(These amendments are made under the authority of Section 307 (a) of the Federal Aviation Act of

1958 (49 U.S.C. 1348).

L/MF FACILITIES RETAINED

The Federal Aviation Agency has completed an operational review of the decommissioning of the following L/MF facilities:

Cut Bank, Montana Livingston, Montana Dillon, Montana Pierre, South Dakota Dickinson, North Dakota Lewistown, Montana

A decision to retain these facilities has been reached. This has not changed the Agency policy of retaining the L/MF facilities for IFR or transcribed weather broadcast purposes but has recognized a public need for these listed facilities for VFR purposes.

Therefore, the Cut Bank, Dillon, Livingston and Pierre facilities will be continued in operation.

The Dickinson and Lewistown aids became operational on November 29, 1965. These facilities will be only approved as VFR navigational aids.

NECESSITY: Any luxury on which you can make a down payment.

DIRECTOR LYNCH RECEIVES NORTHWEST'S TOP FLIGHT PLAQUE



Director Lynch receiving his plaque and congratulations from Northwest's Helena Station Manager, Frank Taylor.

Aeronautics Commission Director, Charles A. Lynch, was recently honored by receiving Northwest Airlines' Top Flight Club membership and handsome, personalized wall plaque.

The invitation to become a member of Northwest's Top Flight Club was extended to Mr. Lynch based on NW's recognition of: "experienced air travelers who have contributed to the progress of the air transport industry and who believe in the future of air travel."

Presentation of the plaque and a gold wallet card were made by Mr. Frank Taylor, Northwest's Helena Office Manager.

CONGRATULATIONS



RECENTLY TO MONTANA FLYERS

STUDENTS

Bakken, Clarence J.—Medicine Lake Clark, Jack—Winnett Carson, Lee—Sidney Latka, Paul—Glendive Baxter, Mary—Two Dot Marshall, Marion—Lewistown Majerus, Florence—Lewistown Green, David—Billings Ferguson, Larry—Columbus Smith, Madonna—Lewistown Ten Brook, Joseph—Billings Omholt, Ralph Wynn—Dutton Connolly, John Gary—Great Falls McDonald, John Kenneth—Belt

Mullally, Gregory Francis—Helena Jacks, Jesse Clifford—Hamilton Reese, Michael Alan—Missoula Balison, Dan Vale—Plains Schuett, Michael Norman—Great Falls

Koehmstedt, Floyd—Portland, North Dakota

Burns, Robert Dennis-Butte Kujawa, Patrick—Bozeman Agnew, Thomas—Billings Roppe, Neil-Turner Macek, Kenneth-Great Falls Kitchingman, Frank-Great Falls Hill, Jimmie—Great Falls Kampfe, Helen-Red Lodge Tennison, Marian-Missoula Lund, Gerald Nels-Conner Smith, Douglas-Noxon Jones, Esther Zell—Columbia Falls Sandrock, John Hugo—Great Falls Mattson, Jeanne—Manhattan Schuette, Robert Dale-Missoula Mansfield, Lawrence—Maudlow Mitchell, Curtiss-Kalispell Lacy, Glenn—Thompson Falls Laws, Harold L.—Thompson Falls Fulkerson, David—Plentywood

Ringling, Paul Theodore—Bozeman McClain, Lloyd-Missoula Curry, Robert III—Lolo Willett, Kenneth—Missoula Reese, Marshall—Butte Skaw, Loren-Dutton Ricklick, Craig-Ulm Wagner, Mabel Marie—Helena Duncan, Frank-Malta Schweigert, Weldon—Great Falls Boucher, Patty—Valier Solwold, Donald Bernard—Great Boyd, Kenneth Robbins-Bozeman Dunlap, Dennis-Missoula Keefer, Louis-Boise, Idaho Seines, John-Polson Ulvedal, Robert—Portland, Oregon Rugg, Raymond—Arlee Hoffman, Richard-Wilmington, Delaware Korkalo, Roy-Missoula Stauffacher, Thomas—Rockford, III. Hall, David—Cincinnati, Ohio Fisher, Jeffrey—Whittier, Calif. Toy, Kenneth—Maxville

PRIVATE

Podmore, Phyllis-Helena Johnson, Alfred—Anaconda Caffyn, Thomas—Great Falls Schwenk, Jan Raynard—Great Falls Buck, Thomas Allen-Billings DeWit, Cornelius-Missoula Kidd, William—Great Falls McKnight, William Stanley—Butte Biggerstaff, Michael—Denton Tice, Edward—Great Falls Brogger, James—Missoula Bonham, Charles Oliver-Drummond Smith, Loren—Cut Bank Straus, Donald—Butte Catron, Karen—South Dakota (Camp Crook) Shipp, Kenneth—Glasgow Rees, Donald M.—Sidney Serquina, John-Miles City Hafer, Ann-Billings Pierson, Charles F.-Long Lake, Minn. Herrod, Bron, T.—Billings

ADVANCED OR SPECIALIZED

Thomas, Richard—Billings
Bell, Brian—Winipeg, Manitoba
Wardell, Harry—Billings
Gerard, Sumner—Ennis
Eisele, Robert—Sheridan, Wyo.
Sperling, Wayne—Butte
Skovgaard, Ove R.—Billings
Stevens, Thomas E.—Two Dot
Strissel, Dale—Billings
Bentson, Sterling—Hettinger, N.D.
Brogdon, James—Wewahitchka,
Florida

Habedank, Otto—Sidney Jones, Warren—Harlowton

Peikert, John—Billings
Larson, Marvin—Bynum
Yaeger, William—Lewistown
Chapman, Keith—Winnipeg, Canada
Greensides, James—Winnipeg, Canada
Jackson, Wilbur, Great Falls

Jackson, Wilbur—Great Falls Lueck, Joy—Missoula Bennett, Paul—Missoula Luck, Henry—Calgary, Alberta Killworth, Michael—Miles City Crossley, Robert—Missoula

"A CASE IN POINT"

By Charles A. Smith Commission Attorney

"Aircraft Accident— Pilots Negligence"

In a recent State Court action the plaintiff sought to recover damages for the death of her husband who was killed in an airplane crash. The jury returned a verdict for the plaintiff in the sum of \$35,000. Judgment was entered on the verdict and the defendant appealed to the State Supreme Court from that judgment.

At the time of the tragedy there were four persons riding in the airplane. Upon approaching the landing strip at the airport where the pilot intended to land, he was compelled to circle the airport and come in for a second approach to the landing strip because another airplane was landing at that time. While doing so the airplane crashed to the ground killing all of the occupants.

The Complaint charged negligence on the part of the pilot: (1) In making a right, rather than a lefthanded approach to the landing field; (2) In having the propeller of the airplane in high rather than low pitch in approaching a landing and having the landing gear lowered before ascertaining whether a landing could be made, and before learning whether other planes were about to land and thereby causing the plane to stall and fall to the ground; (3) In failing to have the motor overhauled after 650 hours of flight; (4) In failing to keep a proper lookout for the planes lawfully using the landing strip; (5) In failing to raise the landing gear after discovering that the landing strip was occupied by another plane; (6) In making a sharp turn when the propeller was in high pitch and while travelling at a low flying speed at an altitude of approximately 200 feet; (7) In attempting to raise the nose of the plane when it was in a stall position; (8) In piloting the plane when he was inexperienced in the operation of that type of a plane.

Since it would be sufficient to sustain the verdict and judgment if one or more of the acts of negligence was proven and that such negligence was the proximate cause of the death of plaintiff's husband, the Supreme Court did not undertake to determine whether the evidence was sufficient to sustain all of the acts of negligence charged. They did, however, determine that there was evidence or the fact that the pilot attempted to make an improper landing when he observed another airplane on the landing strip, by making a 360 degree circle to the left. The proper landing would have been to parallel the landing on the right hand side and at the proper time turn to the right and return to the proper point to again approach the landing strip. This was known as an "emergency recovery pattern". The pilot in this case did not use the emergency landing pattern but in-stead made a 360 degree circle to the left. Because the wing of the airplane was banked in making a circle to the left, the wing loses lift and the plane loses altitude if the speed is not increased. The evidence disclosed that the plane was banked at a 75 to 80 degree angle in making the turn to the left thereby causing it to lose a great amount of

The Supreme Court also found that the evidence warranted a finding that the pilot approached the landing strip with the propeller in high pitch rather than in low pitch; that a pilot has more control of his plane in low pitch rather than in high pitch; that low pitch is much the same as an automobile in low gear; that a pilot has more power at his disposal when the propeller is in low pitch and can make an immediate takeoff more easily.

Thus, the Supreme Court held that there was ample evidence to sustain a finding of negligence in this regard and that such negligence was the proximate cause of the crash. Accordingly, the judgment against the defendant was affirmed.

FOR SALE: Aeronca Sprayer. 108 Lycoming—Belly tank—Metalized—Tank truck and trailer. Price: \$2500 takes everything. Contact: Morrison Flying Service, Helena. Phone: 442-2190.

FAA INSPECTOR'S CORNER



Our flight test orals have shown weaknesses about the documents required to be in aircraft before flight (See FAR 91.27 and 91.31).

Short field (power) approaches are still giving a few applicants trouble—they tend to "get married" to a power setting and forget about the approach path, and fail to slow the airplane down to the vicinity of the ideal 1.3 landing speed for the final approach, or to make an abnormally large pattern which gives them trouble too. The flight test guide calls for a "normal traffic pattern" to be used, and this requires slowing the airplane down by the time the "key position" is reached on downwind so it will come down out of the sky in a fashion allowing the descent to be controlled by power.

Along these lines, the FAA has flight test guides published on the private and commercial flight tests for airplanes, helicopers, gyroplanes and gliders; on the multiengine, instrument and flight instructor tests. The commercial-airplane, instrument and instructor guides cost a dime apiece; the rest are fifteen cents and they're all available from the Government Printing Office. If you don't use them to prepare your applicants you aren't giving them a fair shake, as they're the procedures followed when we flight test them. * * *

Winter flying is just about upon us with its attendant problems. Have you checked your students and renter pilots out on cold-weather operation? Have you gone over a few of the techniques of handling themselves in marginal or deteriorating weather? Remember, if the weather is obviously bad, you can keep them on the ground at home, but if it gets bad unexpectedly enroute (we've heard a rumor that this happened to a pilot once) they should have an idea of what to do. A little preparation along these lines might just keep them from panicking and doing something foolish!

There is a new type periodic in-

spection sticker available which lists the due date of periodic. Operating an aircraft without the required periodic inspection invalidates the Airworthiness Certificate. The sticker will help prevent this situation.

OPEN LETTER TO ALL MONTANA AGRICULTURAL OPERATORS:

Application forms for the new certificate have been sent. The name and address of the applicant must be exact, as on the air taxi certificates, see following examples:

An individual requesting certificate in his own name:

John J. Doe P.O. Box 111 Mountainville, Montana Operating as: Individual

For an individual doing business under a company name:
John J. Doe d/b/a
Mountain Flying Service
(address etc. as above)
Operating as: Individual

Partnership requesting certificate under both partners' names:
John J. Doe and Richard Doe (address etc. as above)
Operating as: Partnership

Partnership doing business under a company name:
John J. Doe and Richard Roe d/b/a
Mountain Flying Service
(address etc. as above)
Operating as: Partnership

For a corporation:

Mountain Flying, Incorporated, (or Mountain Flying Corporation—as shown on articles of incorporation filed with State of Montana) (address etc. as above) Operating as: Corporation

For a corporation doing business under a name other than that of the corporation:

Mountain Flying, Inc. d/b/a Strongarm Dusters (address etc. as above) Operating as: Corporation

For individuals doing business as a company:

John J. Doe, President Richard Roe, Sec'y-Treas. d/b/a Strongarm Dusters (address as above) Operating as: Company

For item 3 of application list principal operations base, which may be Doe's Farm Strip, etc. The above should cover all types of operation in the district. If you have any

questions give us a call and we'll be glad to answer any questions.

ALL APPLICATIONS MUST BE IN OUR OFFICE BEFORE DECEMBER 31 IN ORDER TO GET IN UNDER THE GRANDFATHER CLAUSE. Remember mail is slow during the Christmas rush.

From your GADO Inspectors.

NOTE: If you have not received your application—notify the GADO in your area immediately.

FEDERAL AVIATION AGENCY EXAM-O-GRAM NO. 10 FUEL CONTAMINATION

Excerpts from an Aircraft Accident Report: ". . . Subsequent examination of the engine and its components revealed large deposits of foreign material, sediment, and water in the fuel strainer, carburetor bowl, and fuel pump in sufficient quantities to cause stoppage. . Probably cause of accident: Inadequate preflight action by the pilot; subsequent engine failure due to fuel contamination. . . ."

DO YOU KNOW-AND PRACTICE -THE PRECAUTIONS YOU SHOULD TAKE TO AVOID FUEL CONTAMINA-TION? Perhaps you do, but there are many pilots who obviously do not-as evidenced by the alarming increase in the number of fuel contamination-caused accidents. modern aircraft engine is a remarkably reliable and dependable mechanism, but it will not run on water, dirt particles, and other non-combustibles. Let's review this insidious problem by asking—and answering -a couple of rather pointed questions about this subject.

1. WHAT CAUSES FUEL CON-TAMINATION?

A. Storing the aircraft with partially filled fuel tanks may cause condensation and water contamination. You have, no doubt, often noticed moisture (or dew) on the outside of your aircraft early in the morning. When you noticed this, did it occur to you that this same moisture could form on the inside walls of your fuel tanks? Water is the worst offender in these contamination cases, and condensation inside the tank is one of the methods by which it finds its way into your fuel system.

B. Servicing the aircraft from im-



properly filtered tanks, particularly small tanks or drums, is another principal source of fuel contamination. This practice frequently introduces both dirt and water into the aircraft fuel system.

2. WHAT PRECAUTIONS SHOULD THE PILOT TAKE TO AVOID FUEL CONTAMINATION?

A. PREFLIGHT ACTION: Drain a generous sample of fuel (several ounces-not just a trickle or two) into a transparent container from each of the fuel sumps. (Notice that we specified each of the fuel sumps. This includes not only the main gascolator, but also the wing tank sumps.) Examine the sample of fuel from each sump for water and dirt contamination. Water will not mix with gasoline. If present, it will collect at the bottom of the transparent container and will be easily detected. If water or dirt appears, continue to drain fuel from that sump until you are sure the system is clear of all water and dirt. (NOTE: If your aircraft is not equipped with wing tank quick-drain petcocks, it is recommended they be installed. This can make the preflight check of the wing tank sumps much more convenient, as the frequent removal and replacement of wing tank sump arain plugs can be a time-consuming operation.)

B. POST-FLIGHT ACTION: (1) Top off your tanks at the end of the day to a void condensation and water contamination inside your fuel tanks. Although this is a desirable pro-cedure to follow at the end of each flying day (assuming your loading schedule for the next day will permit a full load of fuel), it is particularly important that this is done if the aircraft is to stand idle for several days-whether it is tied down out-of-doors or stored in a hangar. (2) Avoid, if possible, servicing your aircraft from small tanks or drums. Should this become necessary, the fuel should always be strained through a chamois skin that is in good condition.

C. PRECAUTIONARY MAINTE-NANCE ACTION: In addition to the previously discussed precautions, the following maintenance precautions should be performed on your aircraft at periodic intervals: (1) Inspect and clean the tank fuel outlet finger strainer. (2) Inspect and clean the inlet carburetor screen. (3) Flush he carburetor bowl.

BY FOLLOWING ALL OF THESE PRECAUTIONS, YOU CAN GREATLY REDUCE THE HAZARD OF ENGINE FAILURE DUE TO FUEL CONTAMINATION.

To better understand the reasons for the PREFLIGHT ACTION we have recommended, let's take a brief look at an actual water contamination test conducted by FAA—it's a real eye opener!

After all water was removed from the fuel system of a popular make high-wing monoplane, three gallons of water were added to the half-full fuel tank. After a few minutes, the fuel strainer (g a s c o l a t o r) was checked for water. It was necessary to drain ten liquid ounces of fuel before any water appeared. This is considerably more than most pilots drain when checking for water.

In a second test with the same aircraft in flying attitude (to simulate a later tricycle geared model) the fuel system was again cleared of all water; then one gallon of water was added to the half-full tank. Upon checking the fuel strainer (gascolator) quick drain, more than a quart of fuel was drained before any water appeared.

In both of the above-described tests, about nine ounces of water remained in the fuel tank after the belly drain and the fuel strainer (gascolator) had ceased to show any trace of water. This residual water could be removed only by draining the tank sumps.

HELP STAMP OUT FUEL CONTAM-INATION!

129% INCREASE IN FRONTIER'S BOARDINGS AT LEWISTOWN

Frontier Airlines' boardings at Lewistown, Montana have made a record jump since the four flights per day schedule took effect in August, 1965.

Lewistown, formerly one of the low-boarding stations on Frontier's Montana network, on the old two flight per day schedule, is now the firms fourth best revenue station—exceeded only by Billings, Great Falls and Glasgow.

A total of 170 boardings were made in October which is an increase of 129% over the same month one year ago. This was the greatest increase of all Montana stations.

Station Manager Tony Illich reports that Lewistown is boarding well over the five-per-day required under the CAB's Use-It-or-Lose-It Policy and that the traditionally heavy boarding months are yet to come.

LEWISTOWN STATION COMPARISON FIGURES

	1964	1965
July	108	99
August		169
September	86	143
October	76	170

FRONTIER PASSENGER INCREASE RECORD FOR MONTANA OCTOBER, 1965

		* 2
Station I	ncrease	Boardings
Lewistown	129%	170
Great Falls	41%	570
Glasgow	15%	210
Glendive		78
Billings	7%	1,442



Frontier's Lewistown Station Manager, Tony Illich, about to board their Jet Power 580.

ORDE	R FORM	
O: Montana Historical Society 6th and Roberts, Helena, Montana 59601		
Please place the following order for "Montal	na and the Sky" by Frank W. Wi	ley.
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